BRUHAT BANGALORE MAHANAGARA PALIKE

NAME OF WORK:- Construction of Lead of Drain at 16th A Cross in ward No-04 of Yelahanka satellite town sub division

Sl No	Description of work	Unit	Mesurement No.	L	B	D	Qty	Rate	Amount
							Estimation Cost.Rs		10000000.00
1	Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts and lead I By Manual Means B Cement Concrete Grade M-15 & M-20 (PWD SR 2021-22 Vol III Pg no 8 Item No 2.7(i))								
	For Culvert Deck Slab	Cum							
	7th A main road (LHS)	Cum	1	7.60	1.20	0.23	2.10		
		Cum	1	7.20	1.20	0.23	1.99		
		Cum	1	7.00	1.50	0.23	2.42		
	CC Drain								
	Bottom Raft								
	16th A cross road	Cum	1	123.20	0.75	0.15	13.86		
	Side Wall								
	16th A cross road	Cum	2	123.20	0.15	0.60	22.18		
	Basic rate	731.00							
	Area weightage 10%	73.10							
	Sub Total	**804.10**							
	Total						**42.54**	**804.10**	**34204.00**
2	Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts and lead (iii) Dismantling Stone Masonry B Rubble stone masonry in cement mortar. (PWD SR 2021-22 Vol III Pg no 8 Item No 2.10(iv))								
		Cum							
	7th A main road (LHS)	Cum	2	7.60	0.45	0.50	3.42		
		Cum	2	7.20	0.45	0.50	3.24		
		Cum	2	7.00	0.45	0.50	3.15		
	16th A cross to lake connecting	Cum	2	5.00	0.60	1.60	9.60		
	Basic rate	481.00							
	Area weightage 10%	48.10							
	Sub Total	**529.10**							
	Total						**19.41**	**529.10**	**10270.00**
3	Dismantling of barbed wire fencing/ wire mesh fencing including posts, foundation concrete, back filling of pit by manual means including disposal of dismantled material with all lifts and lead, stacking serviceable material and unserviceable material separately. MORTH Specification 202 (PWD SR 2021-22 Vol -III Pg 10 item no 2.24)								
	16th A cross to lake connecting	m	1	6.60		1.80	11.88		
	Basic rate	75.00							
	Area weightage 10%	7.50							
	Sub Total	82.50							
	Total						**11.88**	**82.50**	**981.00**
4	Dismantling of cement concrete pavement by mechanical means using pneumatic tools, breaking to pieces not exceeding 0.02 m3 in volume and stock piling at designated locations and disposal of dismantled materials and stacking serviceable and unserviceable materials separately MORTH Specification No. 202(PWD SR 2021-22 Vol -III P.No.10 - I.No.2.19)								
	16th A cross to lake connecting	Cum	1	6.00	4.00	0.25	6.00		
	Basic rate	422.00							
	Area weightage 10%	42.20							
	Sub Total	**464.20**							
	Total						**6.00**	**464.20**	**2786.00**

Sl No	Description of work	Unit	Mesurement No.	L	B	D	Qty	Rate	Amount
5	Removing and refixing stone slabs of drains and pointing in CM (1:3) (S.R 18-19 P.No-27,I No-5.33)								
	BS Drain Cover Slab	**Sqm**							
	12th A main road	Sqm	2	90.50	0.90		162.90		
	16th A cross road	Sqm	1	294.20	0.90		264.78		
		Sqm	1	170.20	0.90		153.18		
	7th A main road (LHS)	Sqm	1	28.00	0.90		25.20		
						Total	606.06		
	Deduct 80% for Missing/Damaged						484.85		
	Consider 20% Qnty for Removing & Refixing						121.21		
	Pre Cast Drain Cover Slab								
	16th A cross road								
		Sqm	1	124.00	0.90		111.60		
					Total		111.60		
	Deduct 70% for Missing/Damaged						33.48		
	Consider 70% Qnty for Removing & Refixing						78.12		
	Basic rate	105.00							
	Area weightage 6%	6.30							
	Sub Total	**111.30**							
	Total						199.33	111.30	22186.00
6	Earth work excavation by manual means for drains,canals, waste weir, draft, approach channels, key trenches, foundation of bridges and such simillar works in all kinds of soils , as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter, excavated surface leveled and sides neatly dressed disposing off the excavated stuff or sorting & stacking the selected stuff for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools & other appurtenaces required to complete the work. (PWD SR 2021-22 Vol -I Pg No 5 item no 1.4.1)								
	New Drain	**Cum**							
	12th A main road	Cum	2	90.50	1.10	1.05	209.06		
	16th A cross road	Cum	1	294.20	1.10	1.05	339.80		
		Cum	1	170.20	1.10	1.05	196.58		
	7th A main road (LHS)	Cum	1	28.00	1.10	0.90	27.72		
	New Culvert	**Cum**							
	12th A main road	Cum	1	6.40	1.40	0.95	8.51		
		Cum	1	6.70	1.40	0.95	8.91		
	7th A main road (LHS)	Cum	1	7.60	1.40	0.95	10.11		
		Cum	1	7.10	1.40	0.95	9.44		
		Cum	2	7.00	1.40	0.95	18.62		
	Silt Collecting Chamber								
		Cum	1	4.80	3.40	2.45	39.98		
	For Pipe								
	16th A cross to lake connecting								
		Cum	1	14.50	1.50	1.95	42.41		

Sl No	Description of work	Unit	Mesurement No.	L	B	D	Qty	Rate	Amount
	For SSM								
	16th A cross to lake connecting								
		Cum	1	15.00	0.80	1.95	23.40		
	Basic rate	186.00							
	Area weightage 10%	18.60							
	Sub Total	**204.60**							
	Total						**934.55**	**204.60**	**191209.00**
7	Providing **One line dressing** to granite stone slab/ granite stone masonry as per specilcation (P.No.26, I.No.5.17 of PW,P&IWTD SR 2018-19)								
	BS Cover Slab	Sqm							
	Consider 10% Qnty in Front of House		**From Item no.5**				**12.12**		
	Basic rate	897.00							
	Area weightage 6%	53.82							
	Sub Total	**950.82**							
	Total						**12.12**	**950.82**	**11526.00**
8	KSRB 2.8 : Providing and Filling in **foundation with granite / trap broken metal 100mm.** and down size & with approved sand including hand packing, ramming, watering, including cost of all materials and labour with all lead and lift. complete as per specifications. specification.(P.No-7,I No-2.15 of PWD BCSR 2018-19)								
		Cum							
	16th A cross to lake connecting								
		Cum	1	4.80	3.40	0.15	2.45		
	Basic rate	2429.00							
	Area weightage 6%	145.74							
	Sub Total	**2574.74**							
	Total						**2.45**	**2574.74**	**6303.00**
9	Providing and laying in position plain cement concrete Mix 1:3:6 (M10) for levelling course for all works in foundation. Using 40 mm nominal size graded crushed coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machineries, curing, and all the other appurtenances required to complete the work as per technical specifications. (PWD SR 2021-22 Vol -I Pg 15 item no 2.1.3)								
	For Drain	**Cum**							
	12th A main road	Cum	2	90.50	1.10	0.15	29.87		
	16th A cross road	Cum	1	294.20	1.10	0.15	48.54		
		Cum	1	170.20	1.10	0.15	28.08		
	7th A main road (LHS)	Cum	1	28.00	1.10	0.15	4.62		
	Culvert								
	12th A main road	Cum	1	6.40	1.40	0.15	1.34		
		Cum	1	6.70	1.40	0.15	1.41		
	7th A main road (LHS)	Cum	1	7.60	1.40	0.15	1.60		
		Cum	1	7.10	1.40	0.15	1.49		
		Cum	2	7.00	1.40	0.15	2.94		
	Silt Collecting Chamber								
		Cum	1	4.80	3.40	0.15	2.45		
	For Pipe PCC								
	16th A cross to lake connecting								
		Cum	1	14.50	1.50	0.15	3.26		
	For SSM PCC								
	16th A cross to lake connecting								
		Cum	1	15.00	0.80	0.15	1.80		
	Basic rate	5752.00							
	Area weightage 10%	575.20							
	Sub Total	**6327.20**							
	Total						**127.40**	**6327.20**	**806083.00**

Sl No	Description of work	Unit	Mesurement No.	L	B	D	Qty	Rate	Amount
10	Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necesary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement & formwork to be paid separately) (PWD SR 2021-22 Vol -I Pg 17 item no 2.4.2)								
	Drain								
	Bottom Raft	Cum							
	12th A main road	Cum	2	90.50	0.90	0.15	24.44		
	16th A cross road	Cum	1	294.20	0.90	0.15	39.72		
		Cum	1	170.20	0.90	0.15	22.98		
	7th A main road (LHS)	Cum	1	28.00	0.90	0.15	3.78		
	Side Wall	Cum							
	12th A main road	Cum	4	90.50	0.15	0.75	40.73		
	16th A cross road	Cum	2	294.20	0.15	0.75	66.20		
		Cum	2	170.20	0.15	0.75	38.30		
	7th A main road (LHS)	Cum	2	28.00	0.15	0.60	5.04		
						Sub Total	**241.16**		
	Culvert								
	Bottom Raft	Cum							
	12th A main road	Cum	1	6.40	1.20	0.20	1.54		
		Cum	1	6.70	1.20	0.20	1.61		
	7th A main road (LHS)	Cum	1	7.60	1.20	0.20	1.82		
		Cum	1	7.10	1.20	0.20	1.70		
		Cum	2	7.00	1.20	0.20	3.36		
	Side Wall	Cum							
	12th A main road	Cum	2	6.40	0.25	0.60	1.92		
		Cum	2	6.70	0.25	0.60	2.01		
	7th A main road (LHS)	Cum	2	7.60	0.25	0.60	2.28		
		Cum	2	7.10	0.25	0.60	2.13		
		Cum	4	7.00	0.25	0.60	4.20		
						Sub Total	**22.57**		
	Silt Collecting Chamber								
	Bottom Concrete								
		Cum	1	4.60	3.20	0.25	3.68		
	Walls								
		Cum	2	4.00	0.25	1.90	3.80		
		Cum	2	2.15	0.25	1.90	2.04		
	Baffle Wall								
		Cum	1	3.54	0.25	1.30	1.15		
	Deduction								
		Cum	-1	1.13	0.23		-0.26		
				(3.14*1.2*1.2)/4=1.13					
						Sub Total	**10.41**		
	Bed Concrete								
	16th A cross road								
		Cum	1	124.00	0.60	0.15	11.16		
						Sub Total	**11.16**		
	Basic rate	6256.00							
	Add 5% for Shuttering	312.80							
		6568.80							
	Area weightage 10%	656.88							
	Sub Total	**7225.68**							
	Total						**285.31**	**7225.68**	**2061552.00**
11	Supplying, Fitting and Placing un-coated TMT bar Reinforcement in sub-structure complete as per Drawing and Technical Specifications. MORTH Specification NO.1600&2200 (PWD SR 2021-22 Vol -III Pg 99 item no 13.1)								
	For Drain	Cum					241.16		
		kg	Steel assumed 75Kg/Cum of Concrete				18087.30		
		tonne					**18.09**		

Sl No	Description of work	Unit	Mesurement No.	L	B	D	Qty	Rate	Amount
	For Culvert	Cum					22.57		
		kg	Steel assumed 90 Kg/Cum of Concrete				2031.48		
		tonne					2.03		
	For Silt Collecting Chamber	Cum					10.41		
		kg	Steel assumed 110 Kg/Cum of Concrete				1145.43		
		tonne					1.15		
	Basic rate	103329.00							
	Area weightage 10%	10332.90							
	Sub Total	**113661.90**							
	Total						**21.26**	**113661.90**	**2416931.00**
12	Providing and Fixing pre cast covering Slab made out of CC 1:2:4 with 10cm thick and Finishing cutting ,including form work,curing,including cost of alll materials, labour,hire charges of machinery,loading,unloading,lead and lift,transportation etc ,copmplete. (Data Rate)								
	Provide New Slab	Sqm	From item no.5				562.97		
	Data rate	**2337.00**							
	Total						**562.97**	**2337.00**	**1315657.00**
13	Providing and Fixing pre cast **covering Slab 250mm thick** made out of CC 1:2:4 and jelly 20mm Down size with steel reinforcement including form work,curing,including cost of alll materials, labour,hire charges of machinery, loading, unloading, lead and lift,transportation etc ,complete.As per Engineer incharge								
	Culver cover Slab	Sqm							
	12th A main road	Sqm	1	6.40	1.20		7.68		
		Sqm	1	6.70	1.20		8.04		
	7th A main road (LHS)	Sqm	1	7.60	1.20		9.12		
		Sqm	1	7.10	1.20		8.52		
		Sqm	2	7.00	1.20		16.80		
	Silt Collecting Chamber								
		Sqm	1	4.00	2.60		10.40		
	Data rate	**5418.00**							
	Total						**60.56**	**5418.00**	**328115.00**
14	Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necesary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement & formwork to be paid separately) (PWD SR 2021-22 Vol -I Pg 17 item no 2.4.1)								
	Kerb PCC								
	12th A main road	Cum	2	90.50	0.20	0.10	3.62		
	16th A cross road	Cum	1	294.20	0.20	0.10	5.88		
		Cum	1	170.20	0.20	0.10	3.40		
	7th A main road (LHS)	Cum	1	28.00	0.20	0.10	0.56		
	For Pathway Repair								
		Cum	1	15.00	4.40	0.15	9.90		
	SSM Copping								
	16th A cross to lake connecting								
		Cum	1	15.00	0.60	0.15	1.35		
	Basic rate	6096.00							
	Area weightage 10%	609.60							
	Sub Total	**6705.60**							
	Total						**24.72**	**6705.60**	**165750.00**

Sl No	Description of work	Unit	Mesurement No.	L	B	D	Qty	Rate	Amount
15	Providing and fixing pre cast solid cement concrete kerb stones made out of M20 with top width 100mm and bottom width 150mm respectively, 300mm high with CM 1:3 plastering and finishing cutting including form work, curing, including cost of all materials, labour, hire charges of machinery, loading, unloading, lead and lift transportion etc., complete to be laid between travel lane and Cycle Track/Landscape with all lead, lift, loading and unloading complete as per the direction of Engineer in charge (from finish concrete and no painting to be done) Approved Data Rate								
	12th A main road	m	2	90.50			181.00		
	16th A cross road	m	1	294.20			294.20		
		m	1	170.20			170.20		
	7th A main road (LHS)	m	1	28.00			28.00		
	Near Pathway								
		m	2	15.00			30.00		
						Sub Total	703.40		
	Number of Kerb	nos			Length/0.45		1564.00		
	Data Rate	496.00							
	Total						1564.00	496.00	775744.00
16	Painting Two Coats on New Concrete Surfaces Painting two coats after filling the surface with synthetic enamel paint in all shades on new plastered concretesurfaces. MORTH Chapter 803 (PWD SR 2021-22 Vol III Pg no 56 Item No 8.10)								
	Kerb Painting	Sqm							
	12th A main road	Sqm	2	90.50		0.35	63.35		
	16th A cross road	Sqm	1	294.20		0.35	102.97		
		Sqm	1	170.20		0.35	59.57		
	7th A main road (LHS)	Sqm	1	28.00		0.35	9.80		
	Near Pathway								
		Sqm	2	15.00		0.35	10.50		
	Basic rate	85.00							
	Area weightage 10%	8.50							
	Sub Total	93.50							
	Total						246.19	93.50	23019.00
17	Providing and laying heavy duty cobble stones 60mm thick interlock pavers, using cement and course sand for manufacture of blocks of approved size, shape and colour with a minimum compressive strength of 281 kg per m2 over 50mm thick sand bed (average thickness) and compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand underneath to come up in between joints, final compaction of paver surface joints into its final level , including cost of materials, labour and Usage charges of machinery complete as per specifications. (PWD SR 2021-22 Vol II Pg no 64 Item No 9.31)								
	For Pathway Repair								
		Sqm	1	15.00	4.00		60.00		
	Basic rate	1087.00							
	Area weightage 10%	108.70							
	Sub Total	1195.70							
	Total						60.00	1195.70	71742.00

Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
18	Providing and laying reinforced cement concrete pipe NP3 for culverts on first class bedding of granular material in single row including fixing collar with cement. mortar 1:2 but excluding excavation, protection works, backfilling, concrete and masonry works in head walls and parapets Clause 1101.6. (A) 1200 mm dia(PWD SR 2021-22 Vol III Pg no 135 Item No 20.16)								
	16th A cross to lake connecting								
		m	1	14.50			14.50		
	Basic rate	8161.00							
	Area weightage 10%	816.10							
	Sub Total	8977.10							
	Total						14.50	8977.10	130168.00
19	Providing Size Stone masonry with hard stone in foundation & plinth with Cement mortar 1:6 (1 cement : 6 coarse sand) (PWD SR 2021-22 Vol II Pg no 09 Item No 5.4)								
	16th A cross to lake connecting								
		Cum	1	15.00	0.60	1.80	16.20		
	Basic rate	5422.00							
	Area weightage 10%	542.20							
	Sub Total	5964.20							
	Total						16.20	5964.20	96621.00
20	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations and other similar works etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m. (PWD SR 2021-22 Vol I Pg no 09 Item No 1.9)								
	16th A cross to lake connecting								
		Cum	1	14.50	1.50	1.80	39.15		
	Deduction								
		Cum	-1	14.50	1.20	1.20	-20.88		
	Basic rate	204.00							
	Area weightage 10%	20.40							
	Sub Total	224.40							
	Total						18.27	224.40	4100.00

Sl No	Description of work	Unit	Mesurement No.	L	B	D	Qty	Rate	Amount
21	**Providing and fixing Structural Steel work in single section, fixed with or without connecting plate, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete including cost of materials, labour, usage charges of machinery complete as per specifications and as per directions of the Engineer-in-Charge (PWD SR 2021-22 Vol II Pg no 75 Item No 11.1)**								
	Fencing Repair								
	For Vertical Pole								
	SHS 72X72X4.8mmth@9.66Kg/ m								
		Kg	6	2.10		9.66	121.72		
	For Horizontal Members								
	Pipe NB-32,D 42.4,4mm Th@3.79Kg/m								
		Kg	2	15.00		3.79	113.70		
	Basic rate	91.00							
	Area weightage 10%	9.10							
	Sub Total	**100.10**							
	Total						**235.42**	**100.10**	**23566.00**
22	**Providing and fixing G.I. chain link fabric fencing of required width in mesh size 50x50 mm including strengthening with 2 mm dia wire or nuts, bolts and washers as required complete as per the direction of Engineer-in-charge. (Made of G.I. wire of dia 4 mm) (PWD SR 2021-22 Vol II Pg no 95 Item No 11.58)**								
	Fencing Repair								
		Sqm	1	15.00		1.80	27.00		
	Basic rate	676.00							
	Area weightage 10%	67.60							
	Sub Total	**743.60**							
	Total						**27.00**	**743.60**	**20078.00**
23	**Loading and Unloading of Stone Boulder/Stone aggregates/ Sand/Kankar/Moorum. (Tipper 14 m3) (PWD SR 2021-22 Vol-III Page No.3, Item No.1.1C)**								
	Qty Vide frm Item No-1+2+4+6	**Cum**					**1002.49**		
	Total						**1002.49**	**81.40**	**81603.00**
	Basic rate	74.00							
	Area Weightage 10%	7.40							
	Total	81.40							
24	**Cost of Haulage** Excluding Loading and Unloading Taking output 18 t load and lead 10 km = 180 t.km (PWD SR 2021-22 Vol-III Page No.3, Item No.1.4B)								
	Qty frm Item No-19	**t.Km**		1002.49	1.28		**1283.19**		
	Total						**1283.19**	**115.50**	**148209.00**
	15Km 7*15	105.00							
	Area Weightage 10%	10.50							
	Total	**115.50**							
								Grand Total	**8748403.00**
								GST Charges (12% of estimated cost)	**1049809.00**

No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
								DPR Charges (1% of estimated cost)	100000.00
								Project management And Consultancy Charges(1% of estimated cost)	100000.00
								Miscellenious and rounding	720.00
								Total Amount	10000000.00
									RUPEES ONE CRORE ONLY

CERTIFICATE:

1) The work spot has been inspected and found to be necessary
2) The work spot comes under B.B.M.P
3) The provisions made in the estimate are necessary and minimum
4) The estimate is based on C.S.R of 2018-2019,PWD 2021-2022, Issue rates and Data Rates.

Assistant Engineer
BBMP

Assistant Executive Engineer,
BBMP

Executive Engineer
BBMP

RUDRAPRASAD CONSULTANTS
BANGALORE

Administrative Sanction for Rs. ...100.00 Lakhs
One Crore Rupees Only
is accorded under head ..P-0190
Works Sanctioned by Hon Mayor
Grants.
Registered as CE No. ...04... Subject
to conditions contained in enclosed memo
No.BBMP/EE/YNK-D/AS/04/22-23 Dt: 12/5/22

Executive Engineer

Technical Sanction
Accorded For ..100.00 Lakhs.
Head of A/C...P-0190...
CER NO :.....13..... Dt:12/05/2022